

Chapter
Review

Chemical Reactions

Part A. Vocabulary Review

Directions: Match the items in Column II with the definitions in Column I. Write the letter of the correct term in the blank at the left.

Column I

- _____ 1. process that produces chemical change
- _____ 2. substance that slows down a chemical reaction
- _____ 3. reaction in which heat energy is absorbed
- _____ 4. substance that exists before a chemical reaction begins
- _____ 5. minimum amount of energy needed in order for a reaction to begin
- _____ 6. substance formed by a chemical reaction
- _____ 7. substance that speeds up a chemical reaction
- _____ 8. reaction in which heat energy is released
- _____ 9. a measure of how fast a reaction occurs

Column II

- a. activation energy
- b. catalyst
- c. chemical reaction
- d. endothermic reaction
- e. exothermic reaction
- f. inhibitor
- g. product
- h. rate of reaction
- i. reactant

Part B. Concept Review

Directions: In the space before each equation, write a **B** if the equation is balanced or a **U** if the equation is unbalanced.

- _____ 1. $\text{MgCO}_3 + 2\text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2\text{CO}_3$
- _____ 2. $2\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$
- _____ 3. $\text{CaCl}_2 \rightarrow 2\text{Ca} + \text{Cl}_2$
- _____ 4. $\text{Zn} + 2\text{HCl} \rightarrow \text{ZnCl}_2 + \text{H}_2$

Directions: In the space at the left, write the letter of the answer that best completes the statement or answers the question.

- _____ 5. Evidence that a chemical change has occurred includes a _____.
 - a. change in state
 - b. change in size
 - c. change in shape
 - d. change in color
- _____ 6. An oven's high temperature speeds up chemical reactions because heat _____.
 - a. lowers the activation energy
 - b. activates catalysts
 - c. makes more molecules collide with each other
 - d. reduces the particle size of the reactants

Chapter Review (continued)

- _____ 7. You can slow down the rate of a reaction by _____.
a. increasing concentration c. decreasing particle size
b. increasing temperature d. adding an inhibitor
- _____ 8. Which of the following is *not* an example of an exothermic reaction?
a. the splitting of water into hydrogen and oxygen
b. fireworks exploding
c. fish that emit light
d. propane and oxygen changing into carbon dioxide and water
- _____ 9. In an exothermic reaction, heat is _____.
a. absorbed c. released
b. conserved d. destroyed
- _____ 10. Activation energy is necessary for a chemical reaction to occur because _____.
a. breaking bonds requires energy
b. some reactions happen at cold temperatures
c. all reactions are endothermic
d. forming bonds requires energy
- _____ 11. A chemical that keeps food from spoiling is an example of _____.
a. a catalyst c. a reactant
b. an enzyme d. an inhibitor
- _____ 12. Presence of a catalyst _____.
a. stops a reaction c. slows down a reaction
b. raises the activation energy needed d. reduces the activation energy needed
- _____ 13. To check whether an equation is balanced, _____.
a. add the number of reactants to the number of products
b. make sure the masses of the reactants and products are the same
c. count the number of each type of atom on each side
d. check to see if the reaction is endothermic or exothermic
- _____ 14. Energy is usually only shown with the products in an equation for _____.
a. an endothermic reaction c. an exothermic reaction
b. a synthesis reaction d. activation energy
- _____ 15. The only balanced equation shown is _____.
a. $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$ c. $\text{Ag} + \text{H}_2\text{S} \rightarrow \text{Ag}_2\text{S} + \text{H}_2$
b. $\text{AgNO}_3 + \text{NaI} \rightarrow \text{AgI} + \text{NaNO}_3$ d. $\text{Na} + \text{Cl}_2 \rightarrow \text{NaCl}$